

## Conductive Fluid Logging Sensor and Method

### ABSTRACT

5           In a borehole logging tool, the flow of conductive fluid into or out of a wellbore  
at the wellbore wall is detected and measured with a sensor loop proximate the borehole  
inner wall. The sensor loop includes a series of contiguous sensors that act as  
electromagnetic flowmeters and provide fluid measurements covering the entire  
circumference of the sensor loop. The sensor loop includes an elastic element that  
10       forces the sensor loop outward to maintain pressure along the sensor loop circumference  
against the interior borehole wall. The sensor loop is designed to lie at a non-  
perpendicular angle to the wellbore axis, and mechanical arms press the top and bottom  
of the loop against the borehole inner wall.